

PROJECT SUMMARY

I. Introduction

A construction permit application has been submitted by ConocoPhillips for an Ultra Low Sulfur Diesel (uLSD) project. The uLSD project will enable the refinery to produce low sulfur diesel as required by federal regulation. This project does not involve modifications to other process units at the refinery, including the Fluidized Catalytic Cracking Unit (FCCU) and Coker Unit. The conditions in the proposed permit for the project are based on the project not being a major modification under 40 CFR 52.21, Prevention of Significant Deterioration (PSD) or 35 IAC Part 203, Major Stationary Sources Construction and Modification (MSSCAM). The proposed permit conditions include emission limitations, testing requirements, monitoring requirements, recordkeeping requirements, and reporting requirements.

II. Source Description

ConocoPhillips operates a petroleum refinery located in Roxana, Illinois, Madison County. Madison County is designated as attainment for all pollutants except ozone, which is designated as moderate nonattainment.

The ultra low sulfur diesel (uLSD) project will enable the refinery to produce low sulfur on-road diesel fuel as required by federal regulation. Diesel is made from a number of distinct blend stocks or streams produced at the refinery. This project allows the refinery to remove sulfur from certain streams at the level required to produce ultra low sulfur diesel.

The ultra low sulfur diesel (uLSD) project will enable the refinery to produce low sulfur diesel fuel for on-road motor vehicles, as required by federal regulation. Diesel is made from a number of distinct blend stocks or streams produced at the refinery. This project allows the refinery to remove more sulfur from one of these streams, to the level needed to produce ultra low sulfur diesel by revamping and expanding the existing hydrocracking unit (HCU) and utilizing some of that equipment for a new ultra low sulfur diesel hydrotreater (ULD) unit.

The ULD unit will be a continuous operation that improves the quality of high sulfur feedstock by removing sulfur, nitrogen and metal compounds. The existing reactors will be reconfigured to accomplish the enhanced sulfur removing capabilities.

The reactors require heat which will be provided by an existing heater and one new heater. The existing heater currently has sufficient capacity to handle the required increased firing.

The sulfur recovery unit (SRU) will experience an additional loading of sulfur due to the incremental sulfur removed in the ULD Unit. The SRU currently has sufficient sulfur production capacity to handle this increased loading.

The ULD unit requires hydrogen to operate. This project also involves the construction of a new hydrogen plant.

These projects do not involve modifications to other process units at the refinery, including the Fluidized Catalytic Cracking Unit (FCCU) and Coker Unit.

IV. Applicable Emission Standards

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois. The Board has standards for sources of nitrogen oxides, carbon monoxide, volatile organic material, sulfur dioxide, and particulate matter. This site readily complies with all applicable Board standards.

V. Proposed Permit

The conditions of the permit would contain limitations and requirements that are intended to assure that this project will not trigger the requirements of PSD or MSSCM. The permit conditions establish appropriate compliance procedures, including monitoring requirements, recordkeeping requirements, and reporting requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the refinery is operating within the limitations set by the permit.

VI. Request for Comments

It is the Illinois EPA's preliminary determination that the facility meets all applicable state and federal air pollution control requirements, subject to the conditions proposed in the draft permit. The Illinois EPA is therefore proposing to issue a permit with federally enforceable limits for this project. Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit.

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